

**ABSTRACT OF THE DISCLOSURE**

This invention relates to methods for producing a transgenic *C. elegans* that expresses a human 7TMR pan-neuronally, such that said transgenic *C. elegans* exhibits a known phenotype. These transgenic *C. elegans* can be used in a variety of ways, including, but not limited to: (1) screening and identifying substances that bind to and activate particular human 7TMRs; (2) screening for substances that antagonize human 7TMR activation; (3) identifying human 7TMRs that may respond to particular substances; and (4) evaluating the specificity and efficacy of substances on human 7TMR activation.